

RCRA PART B PERMIT
FOR THE
IDAHO NATIONAL
ENGINEERING AND ENVIRONMENTAL LABORATORY

Volume 18 – Idaho Nuclear Technology and Engineering Center

ATTACHMENT 8

Debris Treatment Processes
Holdup and Collection Tanks
CPP-659/-1659 Storage
CPP-666 FDP Cell Container Storage

Section I
Closure and Postclosure Requirements

Modified Date: 9/3/2003

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I. CLOSURE AND POSTCLOSURE REQUIREMENTS

This closure plan specifies Idaho Nuclear Technology and Engineering Center (INTEC) performance standards and procedures for the four waste management units addressed in this application: debris treatment processes, holdup and collection tanks, storage in CPP-659/-1659, and container storage in the CPP-666 Fluorinel Dissolution Process (FDP) Cell. This plan addresses all units, although they may not be closed at the same time. The activities and closure performance standards described in this plan apply only to Resource Conservation and Recovery Act (RCRA)-regulated wastes. Prior to initiation of closure, all hazardous waste will be removed from the units and transferred to a RCRA interim status/permitted treatment, storage, and/or disposal (TSD) unit.

Closure of the subject units may result in process equipment and building components being dispositioned as recyclable material or reused for any number of activities other than hazardous waste management processes. Conversely, certain process equipment or building components may be declared waste and managed as such. The closure performance standards for decontaminating the debris treatment processes, holdup and collection tanks, storage in CPP-659/-1659, and container storage in the CPP-666 FDP Cell correspond to applicable regulatory guidelines. The closure performance methods that will be employed as applicable to the closure activity are described in Section I-1d(1), -1d(2), -1d(3) and -1d(8). Specifically, closure activities will address contaminated process equipment and building components to be salvaged as scrap metal or other recyclable material; contaminated process equipment and building components to be reused for non-waste management purposes; contaminated process equipment and building components to be disposed of as hazardous waste debris; and residues/wastes resulting from decontamination activities.

**I-1. CLOSURE AND POSTCLOSURE REQUIREMENTS [IDAPA 16.01.05.008 and
16.01.05.012; 40 CFR 270.14(b)(13), 264.112(a)(1) and (2)]**

This closure plan describes the procedures to be used to remove remaining waste residues and to decontaminate process equipment and building components to achieve closure performance standards specified in the Idaho Administrative Procedures Act (IDAPA) 16.01.05.008 [Title 40, Code of Federal Regulations (CFR) Part 264.111]. This closure plan does not include contingent plans for closure as a landfill and postclosure maintenance as a disposal unit. Debris treatment processes, holdup and collection tanks, storage in CPP-659/-1659, and container storage in the CPP-666 FDP Cell will be operated and closed, to prevent releases of contaminants outside the units. Postclosure escape of hazardous waste constituents to the ground, surface water, or atmosphere will be nonexistent. Therefore, continued maintenance activities after closure is completed will not be required. This closure plan satisfies the requirements of IDAPA 16.01.05.008 (40 CFR 264.111 through 264.115 and applicable parts in 40 CFR 264.178, 264.197, and 264.1102).

CPP-659/-1659 and CPP-666 Process Information

Section D "Process Information" of this application presents specific design and process information for the CPP-659/-1659 and CPP-666 units. Pertinent to the activity of closure, this process equipment and information, plan views, design drawings and specifications will be utilized to implement this closure plan in a compliant and technically sound manner. Significant to implementation of this closure plan, Section D identifies which structures and equipment may potentially come into contact with hazardous waste or hazardous constituents, and therefore, will be subject to protocols set forth in this plan. The following subsection supplements Section D information with regard to CPP-659/-1659 and CPP-666 operational constraints that will minimize the spread of hazardous waste and hazardous constituents during operations and design attributes of all units that will aid decontamination efforts during closure.

CPP-659/-1659 and CPP-666 Operational Constraints and Structures That Aid Closure

Significant to final closure activities, all floor and equipment surfaces of CPP-659/-1659 and CPP-666 associated with storage and treatment activities are designed such that foreseeable decontamination efforts will be facilitated. For instance, the filter handling cell (Room 309), where the high-efficiency particulate air (HEPA) Filter Leaching System (HFLS) is located, possesses a stainless-steel cell floor and walls compatible with the waste types and constituents to be managed, as well as foreseeable decontamination media. Furthermore, facilities such as the CPP-659 Decon Area low-level decon room, equipment decon area, and the remote shielded cells possess decontamination equipment that, upon closure, will aid in the decontamination of surfaces that have come into contact with waste and waste residues. Additionally, practices will be followed such that particular debris treatment and decon equipment or components not functionally required during a given treatment campaign will be isolated from the potentially contaminated work area.

I-1a. Closure Performance Standards (IDAPA 16.01.05.008; 40 CFR 264.111)

The closure process is designed to remove and manage waste, eliminate the need for postclosure activities, and minimize generation of waste.

The closure performance standards for the CPP-659/-1659 and CPP-666 units are in accordance with applicable portions of IDAPA 16.01.05.006 through 16.01.05.012 (40 CFR 262 through 270). RCRA/Hazardous Waste Management Act (HWMA) closure activities would be considered precursor efforts to the ultimate facility deactivation and decommissioning (D&D). Technical approaches to this ultimate facility D&D will have practical bearing on the appropriate approach to RCRA/HWMA closure. While this plan cannot necessarily foresee the ultimate U.S. Department of Energy, Idaho Operations Office (DOE-ID) facility D&D for CPP-659/-1659 and CPP-666, it can make assumptions based on past and current RCRA/HWMA closure and D&D activities at the INTEC. This integration of RCRA/HWMA closure activities with subsequent D&D activities is reflected in Number 3 below, as it relates to contaminated process equipment and building components that would remain in place and undergo subsequent facility D&D.

Performance standards, probable scenarios affecting process equipment, building components, and decontamination residuals are indicated below:

1. Contaminated process equipment and building components to be salvaged as scrap metal/materials will be decontaminated as described in Section I-1d. Process equipment and building materials will be decontaminated in a manner and degree as specified by the recycle scrap metal/material vendor in conformance with their recyclable material acceptance criteria. To attain the closure performance standard, the subject process equipment and building components may be subjected to decontamination techniques such as sweeping, brushing, scraping, wiping, or rinsing. The selected means of decontamination will be material-specific and dependent on the effectiveness in attaining the contracted recyclable materials vendor acceptance criteria, minimization of the potential spread of contamination, and minimization of decontamination wastes. All decontamination media and collected dirt and other residuals generated from this closure activity will be managed as identified in Section I-1d of this closure plan.
2. The performance standard for reusable process equipment and building components will be a degree of decontamination consistent with the intended "postclosure" use of the process equipment or building components as determined by Idaho National Engineering and Environmental Laboratory (INEEL)-accepted industrial hygiene and health physics protocols and guidelines. The need to decontaminate room, cell or equipment surfaces will be determined initially by reviewing the operating record for evidence that hazardous waste or hazardous constituents came into contact with the structure or equipment in question. This operational record review will be supplemented by visual observation, where physical access, radiological conditions, and industrial hygiene concerns permit.

3. Other than internal surfaces of tank systems and ancillary equipment, the performance standard for contaminated process equipment and building components that would remain in place and undergo subsequent facility D&D will be a level of chemical or physical decontamination required to render the equipment or structural surfaces "clean," analogous to that specified and identified under IDAPA 16.01.05.011 (40 CFR 268.45). The degree of decontamination will be based on how extensively the equipment or structure was used in waste treatment operations, and the likelihood that it came into direct contact with the hazardous waste. An assessment of the facility operating record and spill records will be conducted to determine the extent of potential waste contamination. In addition, the treatment area will be visually inspected for any signs of release, e.g., waste-related staining. All equipment and structures that have documented releases, waste-related stains, or known contact with waste materials will be decontaminated, using an appropriate decontamination solution/method and/or be decontaminated using a method analogous to an alternative treatment technology identified in IDAPA 16.01.05.011 (40 CFR 268.45).

In the event that this primary performance standard is not achievable upon the initial decontamination campaign, the appropriateness of the decontamination media will be verified and a second decontamination effort will be undertaken, potentially with different and/or more aggressive chemical agents or physical removal methods. If upon completion of the second decontamination campaign, apparent waste-related stains continue to occupy greater than 5% of the equipment or structural surface area, an equipment/building surface sampling regimen will be considered. Design and implementation of this sampling regimen and corresponding data quality objectives and performance standard will be presented to the Idaho Division of Environmental Quality (DEQ), State Waste Programs Office (SWPO), under the pretenses of an amendment to the closure plan. Depending on the timeframes involved, development, SWPO approval and implementation of this sampling regimen would likely require an extension of timeframe to complete closure pursuant to IDAPA 16.01.05.008, 40 CFR 264.113(a) and 264.113(b). It is anticipated that results from such a sampling effort would be utilized to assess the worker, nonresidential scenario risk posed by residual hazardous constituent

contamination, such that a risk-based closure determination could be made and a finding reached that the facility closure performance standards have been attained.

4. The performance standard for contaminated process equipment and building components to be managed as hazardous debris will be the alternative treatment standards for hazardous waste debris in IDAPA 16.01.05.011 (40 CFR 268.45), or the equipment/components will be managed as hazardous waste, per IDAPA 16.01.05.006 through .012 (40 CFR 262 through 270). Contaminated process equipment and building components will be managed as hazardous waste debris, either at an INEEL or off-Site TSD unit. This may entail decontamination of the waste as summarized in Table I-1 until the standard for attaining a "clean debris surface" is achieved, as verified by visual inspection of the contaminated surface. Clean debris surface means that the surface, when viewed without magnification, shall be free of visible contaminated soil and hazardous waste except that residual staining from soil and waste, consisting of light shadows, slight streaks, or minor discoloration. Soil and waste in cracks, crevices, and pits may be present, provided that such staining and waste and soil in cracks, crevices, and pits shall be limited to no more than 5% of surface area. Table I-1 summarizes the potential physical and chemical extractive treatment technologies to be employed and the corresponding type of process equipment or building components. Following decontamination and/or equipment removal, the area will be swept clean of dirt and debris. Materials will be removed and containerized. All collected decontamination media and collected dirt and debris will be sampled, analyzed, and managed accordingly. An alternative to the described closure activities that may be exercised at the time of closure is dismantling, packaging, manifesting as hazardous waste and transport of contaminated equipment to be disposed of to an interim status/permitted TSD unit.

Table I-1. Potential CPP-659/-1659 and CPP-666 Closure Debris Treatment Technologies.

Component or Subsystem	Extractive or Immobilization Treatment Technology¹
Container Storage, Waste Pile, Debris Treatment Unit Surfaces	
Ancillary equipment and surfaces, secondary containment devices	High-pressure steam and water sprays ² , abrasive blasting, CO ₂ blasting
Ultrasonic cleaner, portable soak (containers), steam spray booth, stainless-steel sinks	High-pressure steam and water sprays ² , CO ₂ blasting
Prefilters, HEPA filters	Water washing, spraying, solvent extraction ²
Prefilter and HEPA filter housings	CO ₂ blasting, abrasive blasting, water washing, spraying ²
Structural components (metal wall panels, floor surfaces, structural beams, ceiling materials, etc.)	CO ₂ blasting, abrasive blasting, high-pressure steam and water washing, spraying ² , spalling
Miscellaneous metal ducting	CO ₂ blasting, abrasive blasting, high-pressure steam and water washing, spraying ²
Tank Storage Units and Affected Sumps	
HEPA filter leaching tanks, drying tanks, decon holdup tank, decon collection tank	Not classified as debris, see Section I-1d(2)
Affected ancillary equipment and surfaces, secondary containment devices, including sump surfaces	High-pressure steam and water sprays ² , abrasive blasting, CO ₂ blasting

¹ From IDAPA 16.01.05.011 (40 CFR 268.45, Table 1)

² Would require an Equivalent Technology Approval per IDAPA 16.01.05.011 [40 CFR 268.42(b)]

5. Decontamination media, rinsates, residues, and used personal protective equipment (PPE) generated from the decontamination of recyclable scrap metal/material, reusable equipment, and hazardous waste debris will be characterized per the waste analysis plan (WAP) of this permit application. As detailed in Section C, this characterization will be determined by utilizing acceptable process knowledge or sampling and analysis. Management of mixed waste streams will, as necessary, be addressed in the INEEL Site Treatment Plan and may include incineration, stabilization, or other acceptable means of treatment, as necessary. All characterization activities performed in conjunction with this closure action will be in accordance with the current WAP for this permit or permit application.

I-1b. Partial Closure Activities [IDAPA 16.01.05.008; 40 CFR 264.112(a)(1)]

Many of the CPP-659/-1659 and CPP-666 units share common rooms or cells with utilities, heating, ventilation, and air conditioning (HVAC), or other aspects of miscellaneous INTEC facility operations (e.g., Room 214 shares calciner cell activities with waste storage activities addressed by this Part B permit application). Because of this, it is unclear whether or not it may be desirable to close any of the CPP-659/-1659 and CPP-666 units prior to closure of the facility as a whole. Therefore, partial closure activities would be preceded by notification of the SWPO and undertaking an amendment to the closure plan pursuant to IDAPA 16.01.05.008, 40 CFR 264.113(a) and 264.113(b).

I-1c. Maximum Waste Inventory [IDAPA 16.01.05.008; 40 CFR 264.112(b)(3)]

This Part B permit application includes the Part A hazardous waste permit application for CPP-659/-1659 and CPP-666 units. The Part A permit application indicates the maximum potential waste inventory for CPP-659/-1659 and CPP-666. In addition, the operating record for each unit will identify the occurrence of waste spills, if any, over the operating life, and the measures taken to mitigate the spill.

I-1d. Inventory Removal and Disposal or Decontamination of Equipment, Structures, and Soils (IDAPA 16.01.05.008; 40 CFR 264.111, 264.112, and 264.114)

Selection of specific process equipment and building components, and the degree of decontamination efforts, will be based on whether the equipment and structures have come into direct contact with waste, whether or not there is visual evidence of waste-related staining or streaking, the nature of constituents or contaminants present, and whether the equipment and structures will be managed for recycle, reuse, or disposal as hazardous debris. Due to the predominantly nonliquid-bearing physical form of the wastes to be managed in these units, as well as design and probable integrity of secondary containment at closure, releases to the environment are unlikely. As a result, disposal of contaminated soils pursuant to this closure plan is not anticipated. Section I-1a., Closure Performance Standards (IDAPA 16.01.05.008; 40 CFR 264.111), addresses the protocols for achieving the closure performance standards or management processes for the following groupings of process equipment, contaminated structures and residues:

- Contaminated process equipment and building components to be salvaged as scrap metal/materials
- Contaminated reusable process equipment and building components
- Contaminated process equipment and building components that would remain in place and undergo subsequent facility deactivation and decommissioning
- Contaminated process equipment and building components to be managed as hazardous debris
- Decontamination media, rinsate, residues, and used PPE.

The selected means of decontamination will depend on effectiveness in attaining the closure performance standard, minimization of the potential spread of contamination, and minimizing the generation of decontamination waste. Room or area surfaces contaminated during decontamination of equipment will be closed in the same fashion. If used, fluids from equipment decontamination will be contained within the work area and collected in containers using an ancillary pumping system. Spill booms, spill control pillows, swabs, or other absorbent material(s) may be used to contain the residual fluids and facilitate removal.

Process Equipment and Building Components - Selection of Potential Debris Treatment Technologies Employed

As indicated in Section I-1a, Closure Performance Standard, dismantled contaminated process equipment and building components to be disposed of as solid waste will be managed in accordance with the treatment standards for hazardous debris in IDAPA 16.01.05.011 [40 CFR 268.45(a)]. In general, hazardous debris must be treated for each "contaminant subject to treatment," as defined in IDAPA 16.01.05.011 [40 CFR 268.45(a)], using the technology or technologies specified in IDAPA 16.01.05.011 (40 CFR 268.45, Table 1). The proposed debris treatment and waste storage activities will involve prohibited listed wastes and metal-bearing characteristic wastes. Given this fact, debris treatment conducted as part of facility closure will necessarily consider prohibited listed wastes and EP constituents subject to treatment, and the corresponding treatment standards indicated under IDAPA 16.01.05.011 (40 CFR 268.45). While not all-inclusive, Table I-1 indicates the process equipment, building component or subsystem, and the probable corresponding physical and chemical extractive debris treatment technology description. Any contaminant restrictions relative to application of technologies other than the best demonstrated available technology will be presented to the Idaho Department of Health and Welfare, SWPO for approval, prior to implementation.

Alternate Treatment Technology Selection Process

Prior to implementation of a given alternative treatment technology specified in Table I-1 or otherwise, a comprehensive engineering evaluation will be made of the given form of debris (e.g., metal versus plastic), the known hazardous constituents, radiological considerations, industrial hygiene concerns, and any other factors that may affect technology selection. If, based on this evaluation, a suitable alternative treatment technology is not clearly indicated, a treatability study of one or more technologies may be undertaken on that class of debris waste. Based on the initial engineering evaluation or the successful identification of a technology via treatability studies, an alternative treatment technology will be selected for implementation. In all cases, the performance standard for any technology implemented (specified on Table I-1) will be the clean debris surface standard under IDAPA 16.01.05.011 (40 CFR 268.45).

Room/Cell and Storage Area Surfaces

Room surfaces with contamination as indicated by the assessment will be cleaned of dirt and other residuals, as necessary. Materials will be removed and containerized, followed by decontamination to attain a level of contamination analogous to the "clean debris surface."

Transfer Areas and General Nonwaste Handling Equipment

Equipment and structures such as waste transfer areas into and out of the CPP-659 Vehicle Entry and Truck Bay (Room 417) that have no documented releases, visible signs of release, or no known contact with waste will be decontaminated using customary radiological decontamination practices or normal housekeeping procedures. At a minimum, equipment and structures will be wiped down or mopped with a suitable decontamination medium. Portions of the floor with no known contact with hazardous waste will be mopped or wiped down. Residues generated by this general cleaning or decontamination will undergo a hazardous waste determination in accordance with the current WAP for this permit or permit application. Environmental Protection Agency (EPA) SW-846 or equivalent methodologies will be used, matching contaminant of concern with appropriate sample type, quantity, and analyses.

Hazardous Residue Management

Process equipment and building components that undergo decontamination on-Site will be decontaminated in appropriate areas within the INTEC as necessary, or at other approved INEEL facilities available at the time of closure. If used, fluid resulting from decontamination activities will be contained within the work area and collected in containers using an ancillary pumping or other system as needed. Spill booms, spill control pillows, swabs, or other absorbent materials may be used to contain the residual fluids and facilitate removal. Following decontamination and/or equipment removal, the area will be swept clean of dirt and residuals. Materials will be collected and containerized. Recovered decontamination media and collected dirt and residuals will be characterized in accordance with Section C of this permit application and managed according to the results of the analysis. When sampling and analysis is required, EPA SW-846 or equivalent methodologies will be used, matching contaminant of concern with appropriate sample type, quantity, and analyses. An alternative to the described closure activities that may be exercised at the time of closure is dismantling, packaging, and transport of contaminated equipment to be disposed of at an on-Site or off-Site RCRA interim status or permitted facility for required treatment and subsequent disposal.

All of the indicated waste, residue, and decontamination materials and/or rinsates will be containerized and sampled as described and stored in INEEL RCRA/HWMA-compliant facilities as "Unknown-Pending Sampling and Analysis." In addition, all disposable PPE, other disposable equipment, and all other wastes generated during closure activities will be containerized and characterized in accordance with the current WAP. When sampling and analysis is required, EPA SW-846 or equivalent methodologies will be used, matching contaminant of concern with appropriate sample type, quantity, and analyses. Before being moved from any areas undergoing decontamination, reusable PPE will be decontaminated by removing residual materials from booties, gloves, anti-C's, and spraying, washing, and scrubbing all outside protective clothing surfaces. Treatment and disposal of these waste streams will be addressed in the INEEL Site Treatment Plan and may include incineration, stabilization, or other acceptable methods of treatment, as necessary.

I-1d(1) Closure of Containers (IDAPA 16.01.05.008; 40 CFR 264.178)

Prior to closure and decontamination activities, all hazardous waste managed in containers will be removed, transported to, and managed in an on-Site or off-Site TSD unit. Newly generated waste resulting from decontamination or waste removal efforts may be managed in and/or transported to a 90-day storage area in compliance with IDAPA 16.01.05.006 [40 CFR 262.34(a)] to undergo waste characterization for determination of final disposition. In addition, waste that can be treated within the 90-day timeframe may be sent to a 90-day storage unit for treatment under a State of Idaho-approved generator treatment plan. All hazardous waste in storage containers generated from closure activities will either be transported to TSD units or treated in IDAPA 16.01.05.006 [40 CFR 262.34(a)] 90-day storage units. All sampling and testing activities will be in accordance with the current WAP. EPA SW-846 or equivalent methodologies will be used, matching contaminant of concern with appropriate sample type, quantity, and analyses.

I-1d(2) Closure of Tanks [IDAPA 16.01.05.008; 40 CFR 264.179]

Tanks addressed by this closure plan include those listed in Table I-2.

The tank systems in Table I-2 will be considered "clean closed" when the following closure performance standards are met:

- All RCRA hazardous wastes are removed from the tanks, pipelines, ancillary equipment, and surfaces of the system

Table I-2. CPP-659 Tank Systems.

Vessel Number	Total Volume in Gallons
VES-NCD-141 HFLS Leaching Tank	120
VES-NCD-142 HFLS Drying Tank	70
Decon Room Small sink (SH-NCD-934)	28
Decon Room Large sink (SH-NCD-933)	237
Low Level Decon Room Ultrasonic cleaner (UC-NCD-921)	79
VES-NCD-123	3,800
VES-NCD-129	530
Total	4,864

- If removed from the facility and managed as (1) salvageable scrap metal/materials, or (2) reused as process equipment, the performance standard is that specified in Section I-1a above
- If left physically intact, in place and not managed as hazardous waste debris, the tanks, piping, ancillary equipment, and building interiors associated with these tank systems are decontaminated in a manner to achieve the performance standard. Probable decontamination solutions may include one or more acidic or alkaline decontamination solutions, or appropriate combinations of the two.

Tanks indicated in Table I-2 other than VES-NCD-123 and -129 are small and bottom-draining and, as a result, will not retain any measurable sludge, sediment, or other solids at the time of closure. By virtue of the processes upstream of VES-NCD-123 and -129, these tanks

will likely contain some quantity of solids at closure. Due to the radiological environment associated with these tanks, the absence or presence of this solid material at the time of closure will be verified by radiation surveys/profiles of the vessel exteriors (with higher readings at the bottom indicative of solids), and/or boroscope or similar examination of the tank interior. VES-NCD-123 and -129 possess air sparging capabilities, which will aid in suspending solid materials for transfer out of the tank system, potentially to CPP-604 Process Equipment Waste Evaporator (PEWE) Storage Tank VES-WL-132. Tank VES-WL-132 possesses interim status for storage and tank treatment, specifically decanting of liquid waste from its solid fraction. The amount of solid materials entrained in VES-NCD-123 and -129 prior to initiating closure will likely be minimal due to the practice of sparging their contents during normal liquid waste transfers out of the systems.

In verifying the effectiveness of decontamination activities, the management and operations (M&O) contractor will make use of the following measurements and determinations:

- (1) Levels of removable hazardous chemical constituents on swipe samples taken from decontaminated surfaces. Swipes will be premoistened with mildly acid (pH 3 to 5) solution, appropriate for solubilizing waste constituents adhering to the tank system surfaces. Closure of the tank systems will be considered successful when concentration of hazardous constituents smear samples do not exceed two times the method detection limit (as defined in the appropriate procedure of Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd edition), or
- (2) Levels of hazardous chemical constituents and hazardous characteristics in spent decontamination solutions. Closure of the tank systems will be considered successful when the concentration of hazardous constituents in spent decontamination solutions do not exceed the Toxicity Characteristic Leaching Procedure threshold for characteristic metals and organic compounds, and do not exceed the universal treatment standard (waste water) at 40 CFR 268.40, only for listed constituents managed by the facility, as documented in the operating record. Spent decontamination solutions may be sampled

via the tank VES-NCD-123 and -129 sampling systems, or as necessary, downstream at a suitable PEWE storage tank, and/or

(3) Radiological surveys of tank exterior walls to verify removal of the solid waste fraction, if any, and/or

(4) Boroscope or other visual determination methods for verifying removal of the solid waste fraction, if any.

I-1d(3) Closure of Waste Piles [IDAPA 16.01.05.008 & -012, 40 CFR 264.258, 270.18(h)]

Storage of waste in piles occurs in rooms indicated in Section D-3 of this application. Rooms or cells functioning as totally enclosed waste piles possess stainless-steel-clad containment, and lend themselves to examination, decontamination and verification protocols similar to those specified for container storage areas, in conformance with Section I-1a. Prior to closure and decontamination activities, all hazardous waste managed in containers will be removed, transported to, and managed in an on-Site or off-Site TSD unit. Newly generated waste resulting from decontamination or waste removal efforts may be managed in and/or transported to a 90-day storage area in compliance with IDAPA 16.01.05.006 [40 CFR 262.34(a)] to undergo waste characterization for determination of final disposition. In addition, waste that can be treated within the 90-day timeframe may be sent to a 90-day storage unit for treatment under a State of Idaho-approved generator treatment plan. All hazardous waste in storage containers generated from closure activities will either be transported to TSD units or treated in IDAPA 16.01.05.006 [40 CFR 262.34(a)] 90-day storage units. All sampling and testing activities will be in accordance with the current WAP. EPA SW-846 or equivalent methodologies will be used, matching contaminant of concern with appropriate sample type, quantity, and analyses.

I-1d(8) Closure of Miscellaneous Units [IDAPA 16.01.05.012, 40 CFR 270.23(a)(2)]

Management of mixed wastes in miscellaneous units is described in Section D-8 of this permit application and encompasses a variety of miscellaneous treatment activities within the Decon Cubicles and the Steam Spray Booth. As indicated in Section I-1, facilities such as the CPP-659 Decon Area low-level decon room, equipment decon area, and the remote shielded cells possess decontamination equipment that upon closure will aid in the decontamination of surfaces that have come into contact with waste and waste residues. Additionally, practices will be followed such that particular debris treatment and decon equipment or components not functionally required during a given treatment campaign will be isolated from the potentially contaminated work area. It is anticipated that following closure of the decon cubicles and steam spray booth, the room or cells in question would remain intact in anticipation of decontamination and decommissioning activities. With this scenario in mind, the appropriate performance standard is that indicated in Item 3, Section I-1a, Closure Performance Standards, whereby an assessment of the facility operating record and spill records will be conducted to determine the extent of potential waste contamination. In addition, the treatment area will be visually inspected for any signs of release, e.g., waste-related staining. All equipment and structures that have documented releases, waste-related stains, or have known contact with waste materials will be decontaminated, using an appropriate decontamination solution/method and/or be decontaminated, using a method analogous to an alternative treatment technology identified in IDAPA 16.01.05.011 (40 CFR 268.45). As indicated in Section I-1a, in the event that this primary performance standard is not achievable upon the initial decontamination campaign, the appropriateness of the decontamination media would be verified and a second decontamination effort would be undertaken, potentially with different and/or more aggressive chemical agents or physical removal methods. If upon completion of the second decontamination campaign, apparent waste-related stains continue to occupy greater than 5% of the equipment or structural surface area, an equipment/building surface sampling regimen would be considered. Design and implementation of this sampling regimen and corresponding data quality objectives and performance standard would be presented to the Idaho DEQ/SWPO, under the pretenses of an amendment to the closure plan. Depending on the timeframes involved, development, SWPO approval, and implementation of this sampling regimen would likely require an extension of timeframe to complete closure pursuant to IDAPA 16.01.05.008, 40 CFR 264.113(a) and

264.113(b). It is anticipated that results from such a sampling effort would be utilized to assess the worker, nonresidential scenario risk posed by residual hazardous constituent contamination, such that a risk-based closure determination could be made and a finding that the facility closure performance standards have been attained.

I-1e. Ancillary Closure Activities [IDAPA 16.01.05.008; 40 CFR 264.112(b)(5)]

No ancillary activities such as groundwater monitoring, leachate collection, or run-on/run-off control are appropriate or planned for these units.

I-1f. Schedule for Closure [IDAPA 16.01.05.008; 40 CFR 264.112(b)(6)]

The Director of the IDHW will be notified in writing at least 45 days prior to the date that closure operations are planned to begin.

The projected schedule for closure of these units is generalized as follows:

Activity	Day Completed
Initiate closure activities	Day 0
Complete equipment decontamination	Day 100
Complete surface decontamination	Day 140
Decontaminate tools (where applicable), complete waste assessments, remove wastes	Day 160
Complete all closure activities	Day 180
Submit closure certification to the State of Idaho	60 days after completion of closure

I-1g. Extension for Closure Time [IDAPA 16.01.05.008; 40 CFR 264.113(a) and 264.113(b)]

Closure of these units is scheduled for completion within the prescribed 180-day period. No variance is requested at this time.

I-1h. Certification of Closure [IDAPA 16.01.05.012 and 16.01.05.008; 40 CFR 270.11(d) and 264.115]

A certification of closure for each unit will be provided in accordance with IDAPA 16.01.05.008 (40 CFR 264.115) by an independent, Idaho-registered professional engineer (PE), the M&O contractor, and/or DOE-ID. The certification will state that a given unit has been clean closed in accordance with the approved closure plan. Final closure activities will be considered complete upon submittal of the certification of closure to the IDHW and written acceptance issued by the Operating Permits Bureau. These units will not be closed as a land disposal facility; therefore, a "Notice in Deed" and survey plat are not required.

I-2. Postclosure Plan [IDAPA 16.01.05.012; 40 CFR 270.14(b)(13)]

Since all hazardous or mixed wastes will be removed prior to closure and any residual hazardous chemical contamination will be removed during closure, a postclosure plan is not required.

I-3. Postclosure Notices [IDAPA 16.01.05.012; 40 CFR 270.14(b)(14)]

Since all hazardous and mixed wastes will be removed prior to closure and any residual hazardous chemical contamination will be removed during closure, postclosure notices are not required.

I-9. State Mechanisms

**I-9a. Use of State Required Financial Mechanisms [IDAPA 16.01.05.012 and
16.01.05.008; 40 CFR 270.14(b)(18) and 264.149]**

**I-9b. State Assumption of Responsibility [IDAPA 16.01.05.012 and 16.01.05.008;
40 CFR 270.14(b)(18) and 264.150]**

The INEEL is owned by the U.S. Department of Energy; therefore, the facility is exempt from providing a closure cost estimate, financial assurance mechanism, meeting liability requirements, or compliance with state mechanisms under IDAPA 16.01.05.012 and 40 CFR 270.14(b)(18) and 264.149 and 264.150.